

Memo

To: Kevin O'Brien, Craig Seers
From: Matthew Merritt, P.E.
CC:
Date: July 30, 2013
Re: Kirkmond Detention Pond Operation Summary

Commercial
Infrastructure
Residential



Project Overview:

The Kirkmond Residential Plat project is located at 10032 and 10206 134th Avenue NE in Redmond, WA. According to the King County Soil Survey and independent geotechnical investigation, the site is underlain by Alderwood Gravelly Sandy Loam which is considered a non-infiltratable soil. Flow control of the site will be achieved by means of a detention pond for this project. The flow control will comply with the City of Redmond 2012 Stormwater Management Technical Notebook and the 2005 DOE Manual. Water quality will be achieved by bio-swale treatment of runoff upstream of the proposed detention pond, within roadside swales.

The proposed development area is approximately 7.2 acres, with a total area (including offsite areas) tributary to the proposed detention pond of 8.45 acres. The area draining to 134th Ave NE north of the project frontage will be collected in a bypass line and routed around pond collections, to the 134th AVE SE system connecting to NE 100th St.

Existing Site Drainage:

The existing land area associated with the proposed Kirkmond development is low density residential, and is comprised of 2 residences and ancillary structures, drives and accesses, lawn and landscaped area, and trees. The topography for the existing site forces surface runoff generally south and southwest toward the roadside ditch within 134th AVE NE. There is some area toward south end of the property that drains overland over the southerly property line (see TO-01), but the majority of existing runoff is currently carried within the 134th Ave NE roadside ditch.

Flow Control System:

Flow control for the project site will be achieved through the use of one detention pond (168' X 65') located in Tract 999 at the far south end of the property. Though the existing property has been developed with residences, accesses, ancillary structures and landscaping, the proposed detention facility will control developed site runoff such that fully developed runoff rates will be at or less than pre-developed (fully forested) rates as required by City of Redmond and Department of Ecology. This release rate mitigation will reduce developed site runoff to below that of existing conditions, and will route releases to a new piped system within 134th Ave NE and ultimately to the existing storm pipe system within NE 100th St. This will reduce the overland sheet flows which are currently crossing the southerly property lines in the existing condition.

The geotechnical report for the site indicates that the till soils on-site cannot support LID applications including infiltration; the pond model assumes no infiltration into underlying soils.

The detention pond was designed such that the berm elevation, 300 feet, is set back a minimum of 10ft away from any property line and all existing trees to be retained. The berm will have a width of 6 feet meeting the recommendations by the Department of Ecology.

Detention Pond – Design Summary:

Pond Dimensions:	168' x 65'
Pond Bottom Elev.:	293.0
Live Bottom Area:	10,913 SF (Elev. 293.5)
Pond Internal Sides:	3:1
Pond Berm Elev.:	300.0 (Top of Berm)
Lowest Ex. Ground Elev.	
Within Pond Footprint:	298.0
Storage Pond Depth:	5.5'
Top of Riser Elevation:	299.0
2-yr WSE:	297.15
10-yr WSE:	298.28
50-yr WSE:	299.00
100-yr WSE:	299.04

These Water Surface Elevations (WSE's) show that stormwater storage peaks within the pond will exist within the berm height (above the existing grade) for storm events above the 10-year event.

Pond Discharge and Emergency Overflow:

The pond and its release conveyance system is designed to carry the fully developed site runoff, without adversely affecting adjacent or down-gradient property owners. In the event that a storm event occurs when the pond is full, an emergency overflow pipe collects and carries up to the entire 100-year developed condition runoff to the surface drainage system within 134th Ave SE ROW. See Sheet RD-03 for a general layout of the stormwater system and overflow near the detention pond.

Understanding what 'year event' really means:

The term 'year event' is the common way to express the hydrologic magnitude of precipitation and runoff quantities, and is a statistical representation. There is a direct relationship between 'year event' and the probability such a storm event will occur in a given year, based on statistical analysis. The probability of a 100-year event being equaled or exceeded in any year is 1.0% (1/year event); or a storm magnitude for which less than 1% of record storm magnitudes are higher.

The table below summarizes the statistical analysis of the typical year storm events.

Year Event	Probability of Being Equaled or Exceeded in Any Year
100	1%
50	2%
10	10%
2	50%

Detention Pond Evaluation:

City of Redmond requirements dictate that new developments design flow control (detention) facilities to mitigate developed flows up to a 50-year storm event such that release rates are at or below pre-developed (forested) conditions. The detention pond for Kirkmond requires 6ft of stormwater storage depth (including 0.5ft of siltation depth). The pond bottom as designed is 5ft below existing native/ground surface, and has a 2ft berm on the south end. The 100 and 50 year storm event stage elevations for the pond are 299.04 and 299.00 respectively (See Sheet SD-02 for a detailed section of the pond showing these elevations). These storm event stage elevations are approximately one foot higher than the existing ground elevation approximately one foot below the top of berm (Berm Elevation = 300').

Berm:

The proposed berm (Elevation = 300') provides a one foot freeboard above the 50-year stage elevation. The berm will be constructed from the same soil (Alderwood Gravelly Sandy Loam) excavated during the construction of the pond and when properly compacted per geotechnical recommendations will not allow percolation and infiltration of stormwater. This type of soil is a glacial till and is classified as a Soil Type "C" under the Hydrologic Soil Group for King County (See geotechnical Letter – dated July 3, 2013, and Geotechnical Report for more detailed soils and berm analysis). The top of berm will be a minimum of 6-ft wide, as required by the Department of Ecology, and City of Redmond.

Conclusions and Time Analysis/Risk:

The probability of a 50-year storm event occurring in any given year is 2%. Should a 50-year event occur, the water surface will peak at Elevation 299.00 or approximately one foot above the existing ground elevation and one foot below the proposed top of the berm (according to the model data). The table below summarizes the amount of time it will take for the water surface to dissipate from one storm event stage elevation to the next.

Storm Events	Amount of Time to Dissipate
From 100-year WSE to 50-year WSE	1.75 hours
From 50-year WSE to 10-year WSE (Existing ground)	15.19 hours
From 10-year WSE to 2-year WSE	28.71 hours

This model data shows that in any year there is less than a 10% chance that the water surface elevation will be above existing surface grades. Even in a 100-year event, the water surface will be above the existing ground only for approximately 16.9 hours, which is insufficient time for stormwater to penetrate/percolate through compacted till soils as designed. Given the pond's over-compacted glacial till liner detains water at greater nearly 20ft from the southerly property line, and the adjacent property septic curtain drain is approximately 10ft from the common property line (based on the attached septic system record drawings), and the above soils data and stormwater model results, risk of stormwater migrating out of the detention basin or impacting the adjacent down-gradient septic systems is exceedingly low.

The soils present on site, compaction standards for berm construction, the design pond depth nearly entirely contained within existing over compacted cemented glacial till, and the pond release and emergency overflow systems discharging into the 134th Ave SE ROW, are all factors preventing detained stormwater from migration and negatively impacting adjacent properties to the south.

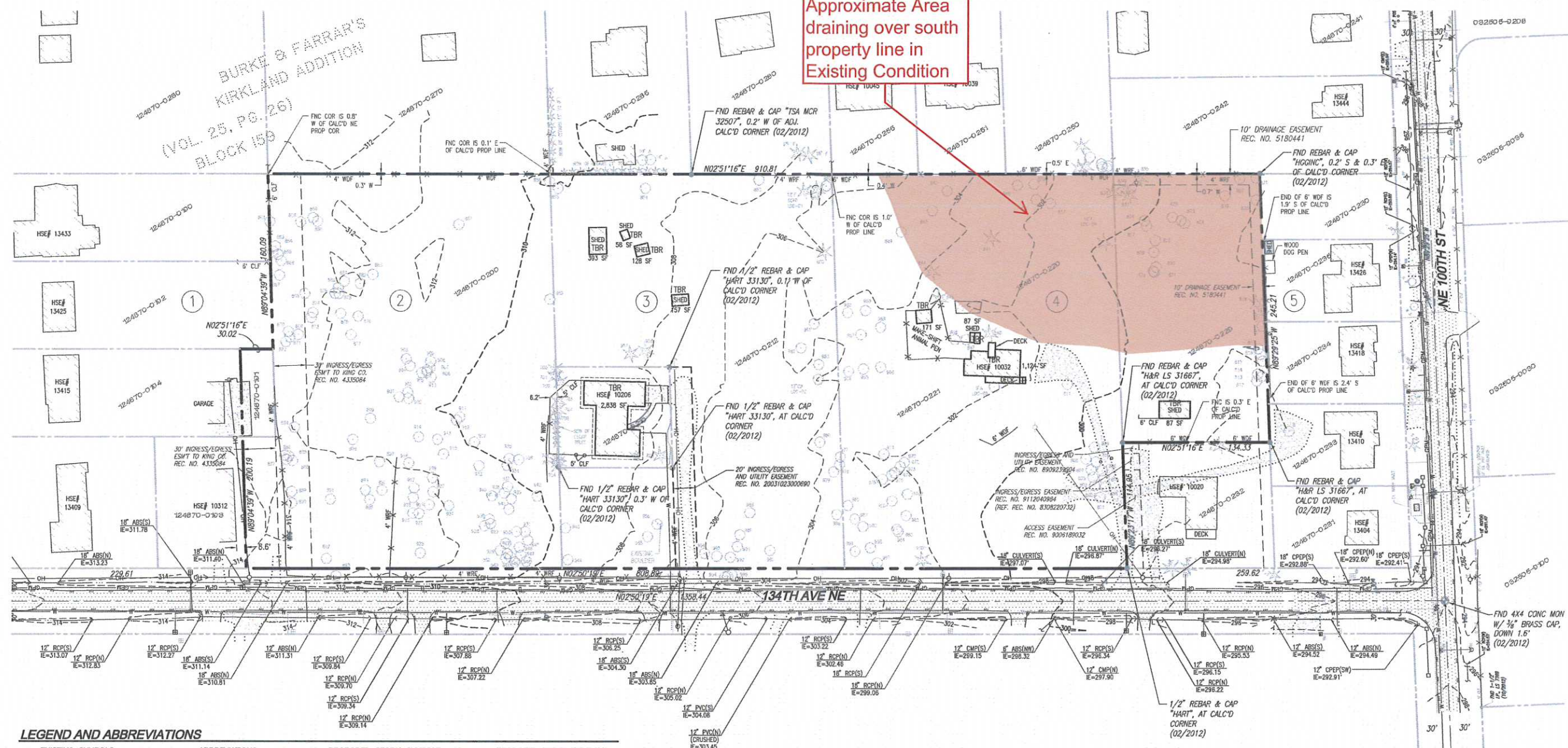
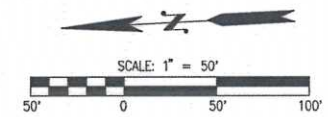
If you should have any questions or concerns, please do not hesitate to call or email (mmerritt@LDCCorp.com, 425-806-1869). Thank you for allowing LDC to be of service.

Sincerely,



Matthew Merritt, P.E.
Project Manager, LDC, Inc.





LEGEND AND ABBREVIATIONS

EXISTING SYMBOLS	DESCRIPTION	ABBREVIATIONS	PROPOSED STORM SYMBOLS	DESCRIPTION	PROPOSED WATER SYMBOLS	DESCRIPTION
⊕	MONUMENT FOUND	CB	⊕	SD CAP	⊕	WATER CAP
•	REBAR & CAP	CMP	■	TYPE 1 CATCH BASIN, GRATED LID	⊕	CONCRETE BLOCKING
⊕	SIGN	CP	■	TYPE 1 CATCH BASIN, SOLID LID	⊕	BUTTERFLY VALVE
⊕	CULVERT	EL	⊕	TYPE 2 CATCH BASIN, GRATED LID	⊕	11" BEND
⊕	FIRE HYDRANT	EXST.	⊕	TYPE 2 CATCH BASIN, SOLID LID	⊕	45° BEND
⊕	GAS METER	FL	⊕	BEEHIVE MANHOLE COVER	⊕	90° BEND
⊕	GUY ANCHOR	IE	⊕	SQUARE YARD DRAIN	⊕	22" BEND
⊕	UTILITY POLE	DI	⊕	ROUND YARD DRAIN	⊕	VALVE
⊕	WATER METER	EL	⊕	STORM CLEAN OUT	⊕	HYDRANT ASSEMBLY
⊕	WATER VALVE	PP	⊕	STORM PIPE	⊕	BLOW-OFF VALVE
⊕	MAILBOX	PVC	⊕	SEWER CAP	⊕	REDUCER
⊕	AIR VALVE	R/W	⊕	SEWER CLEANOUT	⊕	AIR-VAC ASSEMBLY
⊕	BLOW-OFF	STA	⊕	SEWER MANHOLE	⊕	WATER METER
⊕	HOSE BIB	SS	⊕	SEWER PIPE	⊕	WATER PIPE
⊕	SECTION CORNER FOUND	SSMH	⊕		⊕	
⊕	SECTION QTR CORNER FOUND	SWPE	⊕		⊕	
⊕		TYP	⊕		⊕	
⊕		TBR	⊕		⊕	

TOPOGRAPHIC DISCLAIMER

THE TOPOGRAPHIC SURVEY WAS PERFORMED BY LDC, INC. ON 2/07/12. ANY CHANGES TO THE SITE AFTER THIS DATE WILL NOT BE REFLECTED IN THE PLANS. ANY DISCREPANCIES FOUND BETWEEN WHAT IS SHOWN ON THE PLANS AND WHAT IS NOTED IN THE FIELD SHOULD BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER.



THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2011 CITY OF REDMOND STANDARD SPECIFICATION AND DETAILS.

APPROVED FOR CONSTRUCTION:

FOR: WILLIAM J. CAMPBELL
DIRECTOR OF PUBLIC WORKS CITY OF REDMOND
DATE: 7-24-13
PLAN CHK ENGR: _____
STORM: _____
UTILITY: _____
FIRE DEPT: _____
TRANS / ENGR: _____
PLANNING DEPT: _____

12-0055

NO.	DATE	DESCRIPTION
1	7-24-13	ISSUED FOR CONSTRUCTION

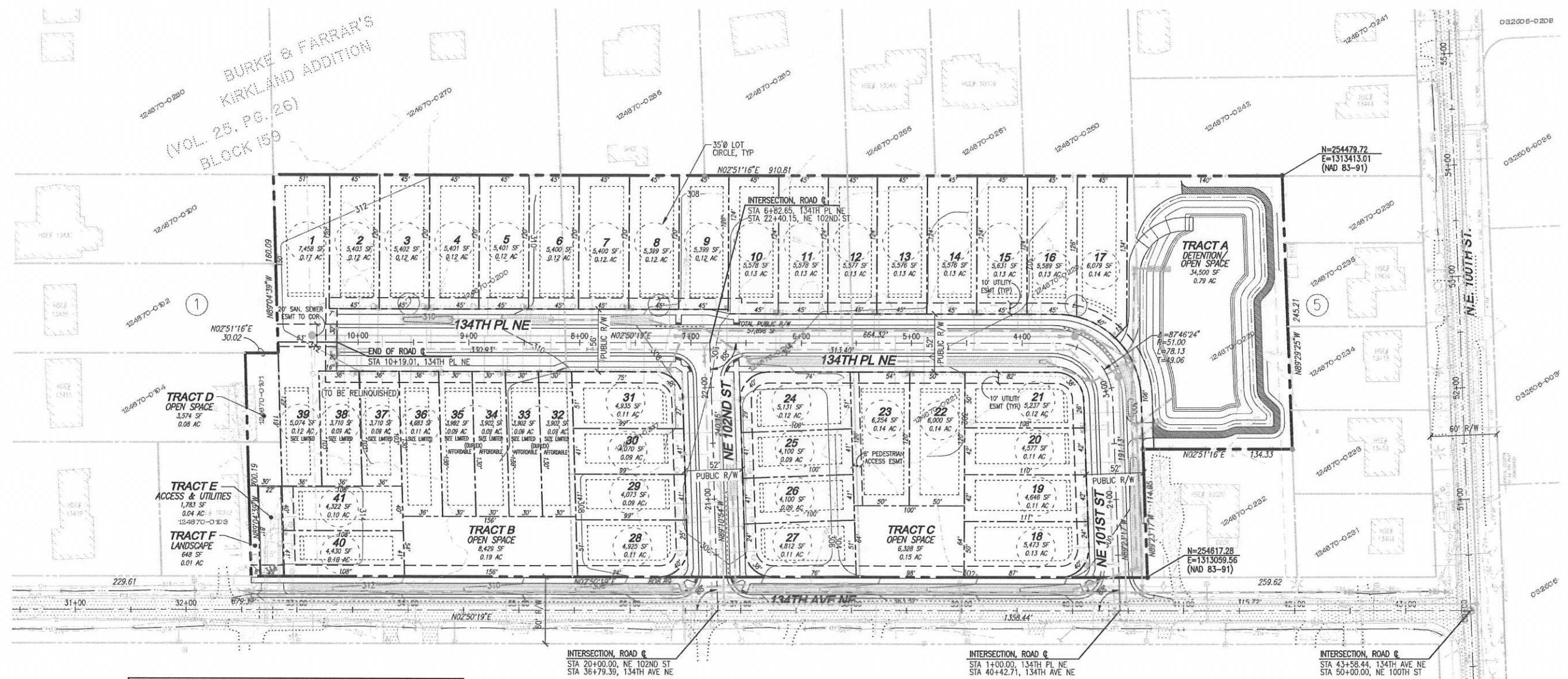
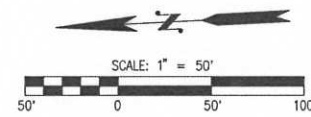
LDC
Engineering
Structural
Planning
Survey
THE CIVIL ENGINEERING GROUP
14201 NE 200th St., #100
Woodinville, WA 98072
Ph: 425.805.1880
Fax: 425.482.2880
www.LDCorp.com

OGDEN FARMS, LLC
KIRKMOND
EXISTING CONDITIONS MAP



JOB NUMBER: 12-109
DRAWING NAME: 12109C-0001
DESIGNER: MEV
DRAFTING BY: MCH
DATE: 7-24-13
SCALE: 1"=50'
JURISDICTION: REDMOND

TO-01
SHEET 2 OF 27



Open Space Calculations		
		(SF)
REQUIRED OPEN SPACE	20% SITE	63,776
REQUIRED DEVELOPMENT WIDE OPEN SPACE	10% SITE	31,888
PROVIDED DEVELOPMENT WIDE OPEN SPACE	TRACTS A	34,500
LOT BY LOT OPEN SPACE REQUIRED	10% SITE	31,888
LOT BY LOT OPEN SPACE PROVIDED		
	LOTS 1-17; 21'x45' REAR YARD AREA INCLUDING PATIOS	16,065
	LOTS 18, 21-24, 27, 28, & 31; 16'x50' REAR YARD AREA INCLUDING PATIOS	6,400
	LOTS 19, 20, 25, 26, 29, 30, 40, & 41; 16'x41' REAR YARD AREA INCLUDING PATIOS	5,248
	LOTS 32-35; 16'x30' REAR YARD AREA INCLUDING PATIOS	1,920
	LOTS 36-39; 16'x36' REAR YARD AREA INCLUDING PATIOS	2,304
	TOTAL LOT BY LOT OPEN SPACE PROVIDED	31,937

PROJECT INFORMATION

SITE ADDRESS: 10044 134TH AVE NE, REDMOND, WA 98033
TAX PARCELS: 124670-0191, 124670-0200, 124670-0212, 124670-0220, 124670-0221, 124670-0229 AND 1246700210
SITE AREA: 318,878 SF 7.32 AC
ZONING: RIN
NUMBER OF UNITS: 37 BASE UNITS ALLOWED
20% SIZE LIMITED = 7 (UNITS 32-38)
10% REQUIRED AFFORDABLE = 4 (UNITS 32-35)
BONUS UNITS ALLOWED: 4
BONUS UNITS PROVIDED: 4
TOTAL UNITS PROVIDED: 41
CODE SECTION: 21.08.070 RIN-ZONE
ATTACHED DWELLING UNITS: MIN LOT SIZE DUPLEX LOT COMBINED= 1.5 x (4000)= 6000 SF
LOTS 30-33 EXEMPT PER R2C 21.08.260.C.6E

AVERAGE LOT SIZE: 5,017 SF
LOT CIRCLE: 35 FEET
LOT FRONTAGE: 20 FEET MINIMUM
FRONT SETBACK: 15 FEET BLDG/18 FT GARAGE
SIDE SETBACK: 5/10 FEET
REAR SETBACK: 10 FEET
SIDE STREET SETBACK: 15 FEET
MAX LOT COVERAGE: 35%
MAX IMPERV. SURFACE: 65%
MAX HEIGHT: 25 FEET

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Call 2 Business Days Before You Dig
811 or 1-800-424-5555
Utilities Underground Location Center

THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2011 CITY OF REDMOND STANDARD SPECIFICATION AND DETAILS.

APPROVED FOR CONSTRUCTION:

FOR: WILLIAM J. CAMPBELL
DIRECTOR OF PUBLIC WORKS CITY OF REDMOND
DATE: _____
PLAN CHK ENGR: _____
STORM: _____
UTILITY: _____
FIRE DEPT: _____
TRANS / ENGR: _____
PLANNING DEPT: _____

THE OFFICIAL IS FOR THE RECORD CONCEPT ONLY. THIS PLAN IS NOT TO BE USED FOR CONSTRUCTION. ANY CHANGES TO THE SITE AFTER THIS DATE WILL NOT BE REFLECTED IN THE PLANS. ANY DISCREPANCIES FOUND BETWEEN WHAT IS SHOWN ON THE PLANS AND WHAT IS NOTED IN THE FIELD SHOULD BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER.

12-0055

REVISIONS		
NO.	DATE	DESCRIPTION
1	7-24-13	ISSUED FOR CONSTRUCTION

Engineering
Structural
Planning
Survey

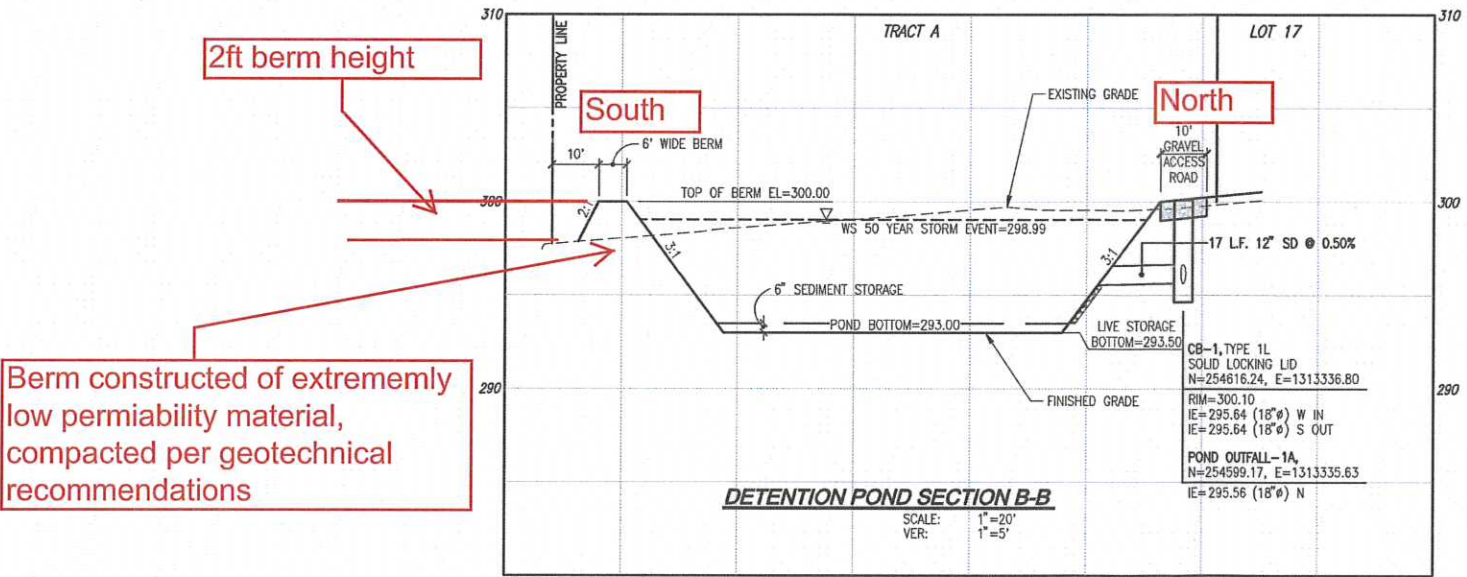
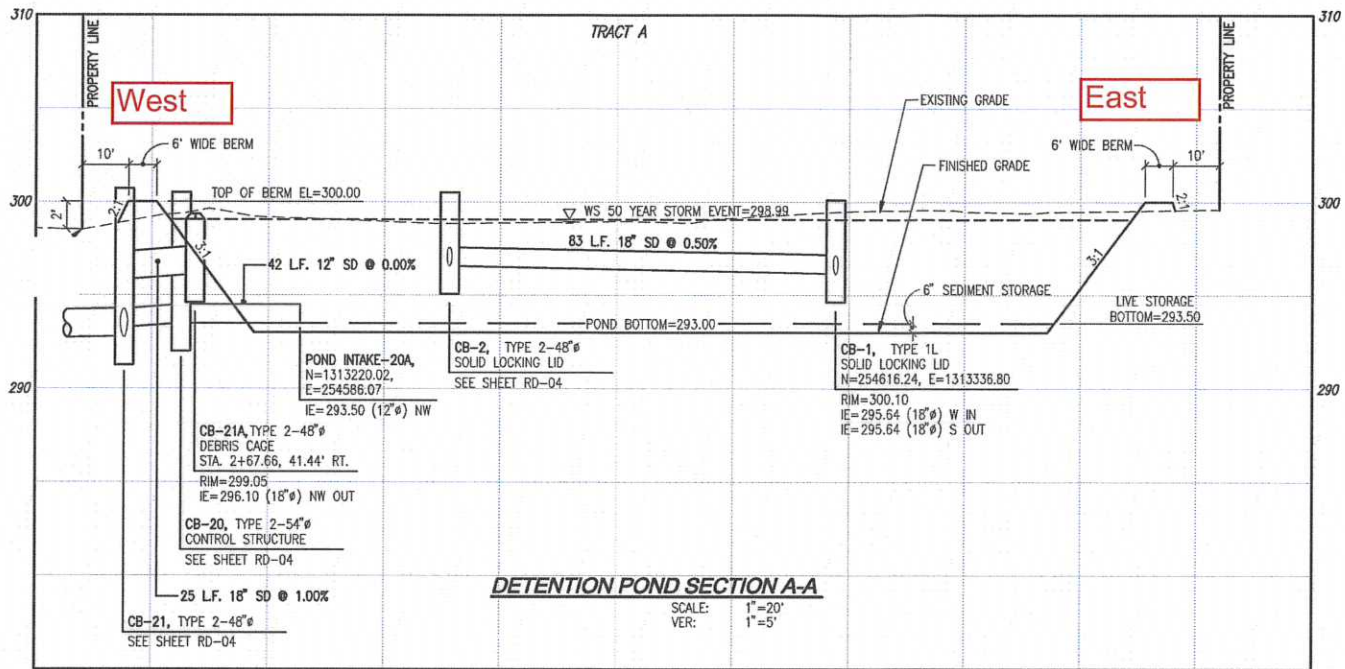
LDC
THE CIVIL ENGINEERING GROUP

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Woodinville, WA 98072
PH: 425.805.1889
FX: 425.482.7893
www.LDCorp.com

OGDEN FARMS, LLC
KIRKMOND
SITE PLAN



JOB NUMBER: 12-109
DRAWING NAME: 12109C-SP01
DESIGNER: MEV
DRAFTING BY: MCH
DATE: 7-24-13
SCALE: 1"=50'
JURISDICTION: REDMOND



GENERAL CONSTRUCTION NOTES

1. THE CITY SHALL EXERCISE FULL CONTROL OF ALL EXCAVATING, CONSTRUCTION AND OTHER ENCROACHMENTS INTO CITY RIGHT-OF-WAY. THE DEPARTMENT OF PUBLIC WORKS INSPECTION SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
2. NO OPEN-CUT CROSSINGS OF CITY STREETS SHALL BE MADE WITHOUT AN APPROVED STREET AND CURB PERMIT (RIGHT OF WAY PERMIT).
3. ALL OPEN-CUTS OF CITY STREETS SHALL BE AS FOLLOWS:
 - A. EXISTING PAVED SURFACE WILL BE SAW-CUT ONE FOOT OUTSIDE EXCAVATION PERIMETER. EXCESS SAW CUTTING DEBRIS SHALL BE REMOVED WITH A VACUUM DEVICE AND DISPOSED OF PROPERLY.
 - B. SELECT BACKFILL ALTERNATE MAY BE APPROVED BY THE CITY IN CERTAIN CIRCUMSTANCES.
4. FINAL RESTORATION OF OPEN-CUT PAVEMENT SECTIONS SHALL MATCH THE EXISTING CONDITION (DEPTH AND MATERIAL). THE MINIMUM STANDARDS ARE AS FOLLOWS:
 - A. ASPHALT CONC. PAVEMENT REMOVE EITHER SEVEN (7) INCHES OF CUF OR ASPHALT COLD MIX PATCH AS APPROPRIATE. SAW-CUT AND TOP EDGES OF EXISTING ROAD SURFACE TO A NEAT LINE AND THEN APPLY ASPHALT TACK COAT. PLACE A 4-INCH MINIMUM COMPACTED THICKNESS OF ASPHALT TREATED BASE. LEVEL TO CONFORM TO ADJACENT SURFACES AND THEN PLACE A 3-INCH MINIMUM COMPACTED THICKNESS OF ASPHALT CONCRETE PAVEMENT C. A. IF THE RESTORATION IS DEEMED INADEQUATE BY THE CITY, THE CONTRACTOR SHALL GRIND AND OVERLAY THE FULL WIDTH OF ROADWAY. CEMENT CONC. PAVEMENT REMOVE NINE INCHES OF PATCHING MATERIAL AND PLACE A 9 INCH THICK SECTION OF CEMENT CONCRETE PAVEMENT.
 - B. SHOULDERS DISTURBED BY EXCAVATION SHALL BE RE-SHAPED TO ORIGINAL CONDITION AND SURFACED WITH A MINIMUM 3\"/>
 6. TRENCH CONSTRUCTION OUTSIDE OF THE ROADWAY (LANDSCAPED AREAS, UTILITY STRIPS, ETC.) SHALL BE ACCOMPLISHED AS FOLLOWS:
 - A. PIPE SHALL BE BEDDED IN GRANULAR MATERIAL MEETING SECTION 9-03.15 OF THE STANDARD SPECIFICATIONS.
 - B. BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 85% OF MAXIMUM DENSITY AS DETERMINED BY MODIFIED PROCTOR (ASTM D1557) AT OR BELOW OPTIMUM MOISTURE CONTENT USING A MAXIMUM OF ONE LIFTS.
 - C. TOPSOIL MEETING SECTION 9-14.1 (1) SHALL BE PLACED ON ALL AREAS REQUIRING SEED OR SOD TO THE FOLLOWING DEPTH.
 - (1) SEED - 4\"/>
 - (2) SOD - 5\"/>
 7. EXISTING DRAINAGE DITCHES, CULVERTS, ETC., SHALL BE KEPT CLEAN AT ALL TIMES. TEMPORARY DIVERSION OF ANY DRAINAGE SYSTEM SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL. ANY DRAINAGE CULVERTS, CATCH BASINS, MANHOLES, ETC., DAMAGED BY EXCAVATION SHALL BE REPAIRED OR REPLACED USING NEW MATERIALS AS DIRECTED.
 8. IF, IN THE OPINION OF THE DEPARTMENT OF PUBLIC WORKS, IT APPEARS THAT THE TRAVELED ROADWAY IS, OR MAY BECOME, UNSAFE FOR THE TRAVELING PUBLIC DUE TO WEATHER OR ANY OTHER REASON, ALL WORK SHALL CEASE IMMEDIATELY, AND CLEANUP SHALL BE PROMPTLY ACCOMPLISHED.
 9. THE LENGTH OF OPEN TRENCH ON STREETS SHALL BE A MAXIMUM OF 300 LINEAR FEET.
 10. ALL PIPE PLACED ALONG CITY RIGHT-OF-WAY FOR FUTURE INSTALLATION SHALL BE KEPT AT A SAFE DISTANCE FROM THE TRAVELED ROADWAY AND IN SUCH A MANNER AS TO PREVENT ACCIDENTAL ROLLING ONTO ROADWAY OR SIDEWALK AREAS.
 11. SAFETY RAILINGS SHALL BE REQUIRED WHEN THE BOTTOM OF A ROCK WALL, RETAINING WALL OR SLOPE IS 3' OR MORE BELOW THE FINISHED ELEVATION OF A SIDEWALK OR OTHER PEDESTRIAN FACILITY.
 12. WHEN REQUESTED BY THE CITY INSPECTOR, THE GEOTECHNICAL ENGINEER EMPLOYED BY THE DEVELOPER SHALL VERIFY AND SUBSEQUENTLY ADVISE THE CITY OF REDMOND THAT THE INSTALLATION OF THE PAVING SECTION(S) CONFORMS TO HIS/HER DESIGN. THE PROJECT WILL NOT BE ACCEPTED UNTIL THE WRITTEN DOCUMENTATION IS SUBMITTED.
 13. THE STREET SURFACE SHALL BE KEPT CONTINUALLY CLEAN WITH A POWER SWEEPER OR OTHER APPROVED MEANS.
 14. NO EXCESS MATERIAL OR UNSUITABLE MATERIAL SHALL BE WASTED ON CITY RIGHT-OF-WAY WITHOUT APPROVAL.
 15. ALL MATERIALS SHALL BE READILY AVAILABLE TO THE JOB SITE AND PROVISIONS SHALL BE MADE TO COMPLETE THE CONSTRUCTION IN ONE CONTINUOUS OPERATION. FAILURE TO COMPLY SHALL RESULT IN EXCAVATION BEING HALTED UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED.
 16. FINAL INSPECTION AND APPROVAL:
 - A. ON-SITE INSPECTION DURING CONSTRUCTION SHALL BE PROVIDED BY THE CITY OF REDMOND AND/OR SPECIAL INSPECTION EMPLOYED BY THE OWNER AS APPROVED BY THE CITY OF REDMOND.
 - B. THE USE OF NEWLY CONSTRUCTED UTILITIES SHALL NOT BE PERMITTED UNTIL FINAL INSPECTION AND APPROVAL OF THE ENTIRE CONSTRUCTION SITE HAVE BEEN MADE UNLESS SPECIAL WRITTEN PERMISSION IS OBTAINED FROM THE DIRECTOR OF PUBLIC WORKS, OR DESIGNATED REPRESENTATIVE.
 - C. PRIOR TO FINAL APPROVAL OF CONSTRUCTION, RESTORATION OF THE AREA WILL BE COMPLETE, AND A VISUAL INSPECTION OF THE SITE WILL BE MADE BY THE DEPARTMENT OF PUBLIC WORKS, OR DESIGNATED REPRESENTATIVE.



THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2011 CITY OF REDMOND STANDARD SPECIFICATION AND DETAILS.

APPROVED FOR CONSTRUCTION:

FOR: WILLIAM J. CAMPBELL
DIRECTOR OF PUBLIC WORKS CITY
OF REDMOND
DATE: _____
PLAN CHK ENGR: _____
STORM: _____
UTILITY: _____
FIRE DEPT: _____
TRANS / ENGR: _____
PLANNING DEPT: _____

THIS APPROVAL IS FOR THE DESIGN CONCEPT ONLY. THESE PLANS APPEAR TO BE IN CONFORMANCE WITH THE CITY OF REDMOND DESIGN STANDARDS. THE CITY OF REDMOND DOES NOT GUARANTEE THE ACCURACY OF THE INFORMATION OR THE RESULTS OF ANY CONSTRUCTION. THE CITY OF REDMOND DOES NOT ASSUME RESPONSIBILITY FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. THE CITY OF REDMOND DOES NOT ASSUME RESPONSIBILITY FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. THE CITY OF REDMOND DOES NOT ASSUME RESPONSIBILITY FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT.

12-0055

REVISIONS	
NO.	DESCRIPTION
1	ISSUED FOR CONSTRUCTION
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8	
9	
10	

Engineering
Structural
Planning
Survey

LDC
THE CIVIL ENGINEERING GROUP

14201 NE 200th St., #100
Woodville, WA 98072
Ph: 425.885.1808
Fax: 425.482.2888
www.LDCorp.com

OGDEN FARMS, LLC

KIRKMOND

DETENTION POND SECTIONS



JOB NUMBER: 12-109
DRAWING NAME: 12109C-SD02
DESIGNER: MEV
DRAFTING BY: MCH
DATE: 7-24-13
SCALE: AS NOTED
JURISDICTION: REDMOND

SD-02

SHEET 19 OF 27



Public Health
Seattle & King County

HEALTHY PEOPLE. HEALTHY COMMUNITIES.

ON-SITE SEWAGE SYSTEMS (OSS)

AS-BUILT CERTIFICATION OF COMPLETION

(Submit in Quadruplicate)

OFFICE COPY

ADDRESS OF PROPERTY

13426 NE 100th St.

(Street)

Kirkland (City)

98033 (Zip Code)

SYSTEM TYPE 4th - Subsurface Drp PERMIT NO. 0 N 0 0 8 3 8 1 1 APN (PARCEL #) 1 2 4 6 7 0 0 2 3 5
LEGAL DESCRIPTION Lot 5 / Blk 159 Div 31 Burke FARRARS Kirkland Add.

Owner MAX MEYERS

Designer STEVE A. BAUMA

Master Installer ALAN SEPTIC

ANDY HERNDON

INSTRUCTIONS TO (OSS) DESIGNER: →

STATUS OF AS-BUILT

☐ This as-built is unsatisfactory for the following reason(s):

☐ See attached comments/explanation

☒ I hereby certify that the accompanying drawing and check list accurately represent the system installed at the address/parcel indicated above, and that all requirements and conditions (concerning plumbing stub elevations; maintenance of grades; fills; surface drains; etc.) indicated on the approved site design (or latest approved revision thereof) dated 6/20/08, have been complied with. I further certify that this system meets all requirements of the King County On-Site Sewage Code, Title 13, Code of the King County Board of Health.

ATTACH A SEPARATE SHEET FOR THE AS-BUILT DRAWING PLAN. USE A SCALE OF 1" = 20' OR 1" = 30' (max. paper size 11X17"). ALSO: COMPLETE AND SUBMIT THE AS-BUILT CHECKLIST/SYSTEM INFORMATION SHEET, INSTALLATION PERMIT, DOCUMENTATION OF FINAL COVER, AND OTHER DOCUMENTS APPLICABLE TO THE SYSTEM (Title 13 - SECTIONS 13.56.050 / 13.56.054)

SIGNATURE OF DESIGNER

Steve Bauma

APPROVED 11-6-08

BY: Ken Elliott

Date

TO BE FILLED IN BY HEALTH DEPARTMENT ONLY

Comments:

DISAPPROVED

BY:

Date

☐ NEW CONSTRUCTION: UNLAWFUL TO OCCUPY PREMISES WITHOUT HEALTH DEPARTMENT APPROVAL OF THE OSS / SEPTIC SYSTEM AS-BUILT CERTIFICATION

INSTRUCTIONS TO THE OSS OWNER/SYSTEM USER:

PLEASE REFER TO YOUR OSS OWNER'S OPERATING MAINTENANCE AND TECHNICAL SPECIFICATIONS MANUAL

AND NOTICE ON TITLE PERTAINING TO THE OSS. Your OSS has limitations! Overloading it or disturbing the soil absorption system (SAS) (e.g. drainfield, mound) may cause the system to fail. FOR FURTHER INFORMATION, CONTACT YOUR LOCAL HEALTH DEPARTMENT SERVICE CENTER: (206) 296-4932

October 6/2008

DATE

5100104 State of Washington

CERTIFICATION NUMBER

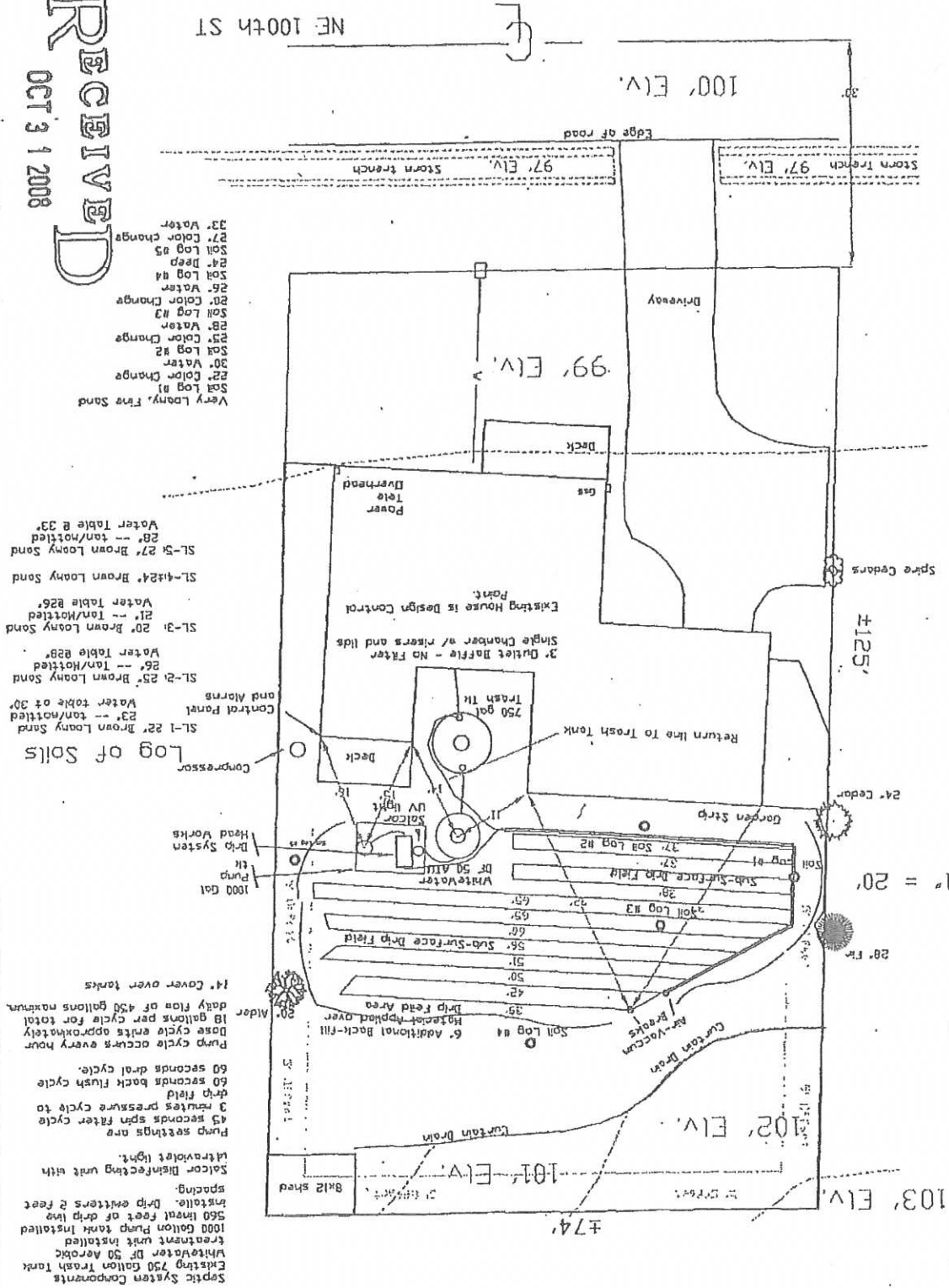
RECEIVED

RECEIVED

OCT 31 2008

EASTGATE PUBLIC HEALTH

RECEIVED
OCT 31 2008



- Whit
- trea
- 1000
- 560
- instc
- spac
- Salcc
- ultrc
- Pump
- 45 s
- 3 mir
- drip
- 60 s
- 60 s
- Pump
- Dose
- 18 g
- daily
- 14° C

